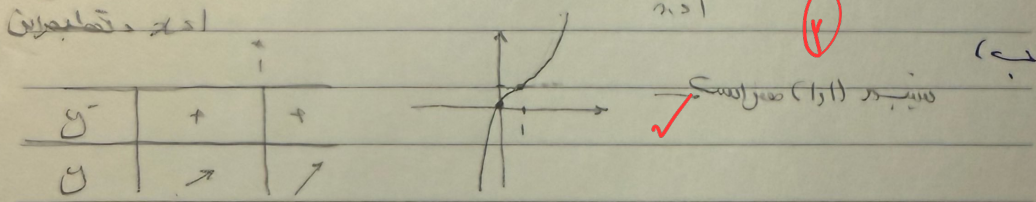


١. الف)  $g(x) = x^2 - 4x + 4 = (x-2)^2 = 0$   $\Rightarrow x = 2$   $\Rightarrow x = 2$   $\Rightarrow x = 2$



٢.  $g(x) = \frac{-x^2 + 4}{x^2} = 0 \Rightarrow \frac{-x^2 + 4}{x^2} = 0 \Rightarrow -x^2 + 4 = 0 \Rightarrow x^2 = 4 \Rightarrow x = \pm 2$

$g(x) = \frac{-x^2 + 4}{x^2} = 0 \Rightarrow x = 2$   $\Rightarrow x = -2$

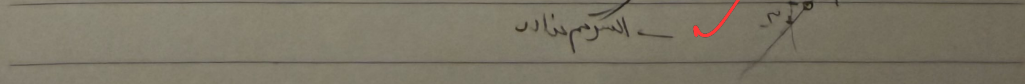
٣.  $g(x) = \frac{x^2}{x^2 - 1} = 0 \Rightarrow \frac{x^2}{x^2 - 1} = 0 \Rightarrow x^2 = 0 \Rightarrow x = 0$

$x^2(x^2 - 3) = 0 \Rightarrow x = 0$   $\Rightarrow x = \pm\sqrt{3}$

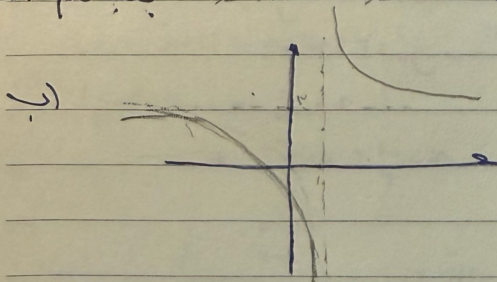
٤.  $g(x) = \frac{-x^2 + 4}{x - 1} = 0 \Rightarrow \frac{-x^2 + 4}{x - 1} = 0 \Rightarrow -x^2 + 4 = 0 \Rightarrow x^2 = 4 \Rightarrow x = \pm 2$

$\frac{-x^2 + 4}{x - 1} = 0 \Rightarrow \frac{-x^2 + 4}{x - 1} = 0 \Rightarrow -x^2 + 4 = 0 \Rightarrow x^2 = 4 \Rightarrow x = \pm 2$

٥.  $g(x) = \frac{x^2 - 4}{x - 1} = 0 \Rightarrow \frac{x^2 - 4}{x - 1} = 0 \Rightarrow x^2 - 4 = 0 \Rightarrow x = \pm 2$



۳.  $\log \frac{2}{1} = 2 - 2$  و  $\log \frac{2}{1} = 2 - 2$  ✓



از هر ۳ کلمه عبوری کنید ✓

۲

۵.  $a \leq x / b \leq P$  ✓

ب)  $f(x) = \frac{x^2 + 1}{x - 1}$  ✓

۲

۶. در هر دو محور دایره (۱) و (۲) داشته باشیم  $(1, 2)$  می گذرد ✓

$y = x + 1 / y = x + 1$  ✓

۲

۷.  $f' > 0$  یا  $f' < 0$  ✓

۲

۸.  $a > \sqrt{a} / a < \sqrt{a}$  ✓

۲

۹.  $\frac{f'(x)(x^2 + x + 1) - (x^2 + x)(2x + 1)}{(x^2 + x + 1)^2} > \frac{x^2 - 1}{(x^2 + x + 1)^2}$  ✓

۲

$f(\sqrt{2}) = \frac{2}{2 - \sqrt{2}}$  ,  $f(-\sqrt{2}) = \frac{2}{2 + \sqrt{2}}$  ✓

Date: / /

Subject: \_\_\_\_\_

اولاً منجزنا

$$y = a^x + ax + b \rightarrow S = 1/p_{s-1} \rightarrow a^x + x - 1 \rightarrow y' = p_{m+1} \quad -10$$

$$y_p = (a^x + x - 1)^m, \quad y_{m+1} = (a^x + x - 1)^{m+1} \rightarrow y' = p (a^x + x - 1)^{m+1} = 0$$

$$L: x = -1/a_{s-1} / m.s$$

$$y' = p (a^x + x - 1)^m (m+1) = 0 \rightarrow x = -1/a_{s-1} \quad (2)$$

	$x$	$-1/a$	$1$
$y'$	-	+	-
$y$	\	/	/

Max

	$x$	$-1/a$	$1$
$y'$	-	-	+
$y$	\	/	/

Min

اولاً منجزنا